

NU-01013

AFTER FINAL: EXPEDITED ACTION

01300045aa

Amendment dated 06/16/2005

Reply to office action mailed 04/15/2005

REMARKS

Claims 1-15 are currently pending in the application. By this amendment, claims 1, 4 and 15 are amended for the Examiner's consideration. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each.

The Examiner has noted an informality in claim 4, which is corrected by the foregoing amendment.

The Examiner has rejected claims 1 and 15 under 35 U.S.C. §112, second paragraph, as indefinite because certain language is confusing and because it is unclear how to determine when the SIR increases or decreases. As described in connection with Figures 3, 5 and 7 (and corresponding logic flows shown in Figures 4, 6 and 8), the invention improves upon the prior art SIR calculator 7 and comparator 8 by providing a new logic, which determines whether the prior art signal (output of comparator 8, the transmission power control command) or a transmission power control-OFF command is inserted into the radio frame to be sent to the mobile station. The invention generates the transmission power control-OFF command when the SIR continuously decreases over a preselected number of slots (i.e. Sttpc). When the transmission power control-OFF command is generated, it is used in place of the prior art transmission power control command. As a result, contrary to the prior art, sharply increasing power levels for a fading mobile station are avoided, thereby also avoiding increased interference levels and reductions in system capacity leading to CDMA system failure.

Consequently, claims 1 and 15 have been amended to make clear the foregoing distinction between the transmission power control command of the prior art and the transmission power control-OFF command added by the present invention, both of which are generated by a method or device in accordance with the invention so as to advance over the prior art.

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In accordance with the prior art, as described in the specification, the transmission power control command controls the power level of a mobile station in the following manner, using the output of a Signal-to-Interference Ratio (SIR) calculator for each slot n , or $SIR(n)$, in comparison to a reference SIR, or R_{fsir} . If $SIR(n)$ is greater than R_{fsir} , then a "power-down" command is issued; if $SIR(n)$ is less than R_{fsir} , then a "power-up" command is issued to the mobile station. The invention provides for interrupting this logic when this logic sharply increases the power level of a mobile station whose signal is fading or temporarily blocked.

The Examiner raises the question whether the claimed description of the prior art mechanism is clear. In particular, the reference value of R_{fsir} is not included in description of the transmission power control command in claims 1 and 15. It will be observed that the reference SIR is included in dependent claims 2, 6 and 10. This technique is in accordance with the current state of the art. However, the applicant lays no claim to the current state of the art, but rather to the improvement that overcomes the deficiencies of the prior art logic. Consequently, in order to fully claim the benefit of the improvement, claims 1 and 15 are framed to describe the prior art logic itself in its generic terms, which is simply for the base station to control the transmission power of the mobile stations in the style of a conventional servo mechanism so as to maintain the power of the received signal at the base station. Thus, when the SIR increases or decreases from a reference level the mobile station power will be lowered or raised to restore the received signal to the reference level. Any technology which accomplishes that result can be improved by the present invention. Claims 1 and 15 have been amended to clarify this generic expression of the prior art that is improved upon by the present invention.

In view of the foregoing, it is requested that the application be reconsidered, that claims 1-15 be allowed, and that the application be passed to issue.

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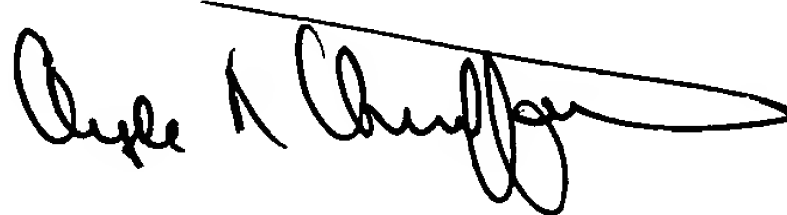
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Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Clyde R. Christofferson", with a long horizontal flourish extending to the right.

Clyde R Christofferson
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